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EXAMINER

SHARMA, SUJATHA R

ART UNIT	PAPER NUMBER
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2681

DATE MAILED: 07/16/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/454,124

Applicant(s)

SEPPANEN, JORMA ANTERO

Examiner

Sujatha Sharma

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 04 June 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-3 and 13-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Coverdale [US 5,809,414] (hereafter Coverdale) in view of Shah [US 6,167,259] (hereafter Shah).

Regarding claims 1,13 Coverdale discloses the method of indicating the quality of a received signal at a mobile phone comprising the steps of receiving a signal from a remote transmitter at the mobile phone; inspecting said received signal for determining quality (either RSSI or BER measurements); and providing an output correlated to the results of said inspecting step and further providing a user discernible indication in response to said output (See summary of invention, col.3, line 23-col.4, line 21).

However Coverdale does not disclose that the signal quality is indicated in terms of an acceptable percentage.

In same field of endeavor, Shah discloses a wireless communication system for evaluating the quality of service in a wireless communication system by analyzing the BER percentage. See summary of invention.

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It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Coverdale in view of Shah such that the signal quality indicated and displayed to the user is in terms of an acceptable percentage since the manner in which the signal quality is indicated lacks criticality in view of the overall function of the invention.

Regarding claims 2,14 Coverdale in view of Shah discloses all the limitations of claim

1. Coverdale further teaches comparing the received signal with a predetermined threshold, and generating a first output whenever the comparing step has met said threshold and for otherwise generating a second output different from said first output (See summary of invention, col.3, line 23-col.4, line 21):

Regarding claims 3,15 Coverdale in view of Shah discloses all the limitations of claim 2.

Coverdale further discloses use with a digital transmission and receiving system wherein the inspecting step includes the step of determining the BER/RSSI of the received signal over a sampling period (see summary of invention, col.4, lines 29-36).

3. Claims 4-7,10-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Coverdale [US 5,809,414] in view of Shah [US 6,167,259] and further in view of Detlef [US 6,243,568] (hereafter Detlef).

Regarding claim 4, Coverdale in view of Shah discloses all the limitations of claim 3.

Coverdale does not expressly disclose a predetermined time-out period. Detlef does teach ensuring that the received signal has failed to meet the threshold value for a predetermined time-out period before generating the output indicative of such a failure. (col. 5, lines 64-67; col. 7, lines 21-38) Since Coverdale in view of Shah and Detlef both teach methods in which a receiver inspects a received signal for determining its quality, it would have been obvious to one

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of ordinary skill in the art at the time the invention was made to modify the method of Coverdale and Shah according to the teachings of Detlef by ensuring that the received signal has failed to meet the threshold value for a predetermined time-out period before generating the output indicative of such a failure so that the user would not be alerted to lapses in signal quality that are only temporary.

Regarding claim 5, Coverdale in view of Shah discloses all the limitations of claim 1. Detlef further teaches the step of establishing a visual indicator for said user discernible indication (col. 5, lines 45-55). It would have been obvious to one of ordinary skill in the art at the time the invention was made to enhance the method of Coverdale and Shah by establishing a visual indication as taught by Detlef so that a user could have access to the indication simply by looking at a display.

Regarding claim 6, Coverdale discloses the method of indicating the quality of a received signal at a mobile phone comprising the steps of receiving a signal from a remote transmitter at the mobile phone; inspecting said received signal for determining quality (either RSSI or BER measurements); and providing an output correlated to the results of said inspecting step and further providing a user discernible indication in response to said output (See summary of invention, col.3, line 23-col.4, line 21).

However Coverdale does not disclose that the signal quality is indicated in terms of an acceptable percentage.

In same field of endeavor, Shah discloses a wireless communication system for evaluating the quality of service in a wireless communication system by analyzing the BER percentage. See summary of invention.

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It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Coverdale in view of Shah such that the signal quality indicated and displayed to the user is in terms of an acceptable percentage since the manner in which the signal quality is indicated lacks criticality in view of the overall function of the invention.

Coverdale and Shah do not disclose the method of separating control signals from voice signals. Detlef teaches a method of separating the Voice and control signals that are received in a time division multiplexed format. (col. 2, lines 36 - 50; Figure 2; col. 3, lines 29 - 45; col. 4, lines 36 - 57; Figure 3, element 58).

Therefore it would have been obvious to one with ordinary skill in the art at the time the invention was made to provide the teachings of Detlef to Coverdale and Shah in order to evaluate the traffic channel more accurately.

Regarding claim 7, Shah further disclose the method wherein the inspecting step includes the step of quantifying the amount, in terms of the percentage acceptable, by which the voice signal fails to meet the predetermined threshold. See table 2.

Regarding claim 10, Coverdale further discloses a user discernible audio signal indicating the voice signal quality (see summary of invention).

Regarding claim 11, Coverdale further discloses a variation in the audio signal indicating the voice signal quality as the voice signal quality departs from the predetermined threshold (see col 4., lines 1-10).

Regarding claim 12, Coverdale in view of Shah discloses all the limitations of claim 6. Coverdale does not expressly disclose a predetermined time-out period.

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Detlef does teach ensuring that the received signal has failed to meet the threshold value for a predetermined time-out period before generating the output indicative of such a failure. (col. 5, lines 64-67; col. 7, lines 21-38) Since Coverdale in view of Shah and Detlef both teach methods in which a receiver inspects a received signal for determining its quality, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of Coverdale and Shah according to the teachings of Detlef by ensuring that the received signal has failed to meet the threshold value for a predetermined time-out period before generating the output indicative of such a failure so that the user would not be alerted to lapses in signal quality that are only temporary.

4. Claims 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Coverdale [US 5,809,414] in view of Shah [US 6,167,259] and further in view of Champness [GB 2 275 848].

Regarding claim 5, Coverdale in view of Shah discloses all the limitations of claim 1. However they do not disclose a method of providing a visual indication of the signal quality. Champness teaches the step of establishing a visual indicator for said user discernible indication (See Fig. 7A). It would have been obvious to one of ordinary skill in the art at the time the invention was made to enhance the method of Coverdale and Shah by establishing a visual indication as taught by Champness so that a user could have access to the indication simply by looking at a display.

5. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Coverdale in view of Shah and in view of Detlef as applied to claim 6 above, and further in view of Besharat et al. (hereafter Besharat), U.S. Patent No. 6,219,540.

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Regarding claim 8, Coverdale in view of Shah and in view of Detlef discloses all the limitations of claim 6. Besharat further teaches that said user discernible step includes the step of causing a visible display to pulsate in the form of blinking (col. 4, lines 49 - 57), which is not disclosed by Coverdale. It would have been obvious to one of ordinary skill in the art at the time the invention was made to further enhance the method of Coverdale and Shah in view of Detlef by providing a pulsating visible display as taught by Besharat so that the blinking of the display might draw the user's attention to the display, or so that a different message or indication could alternately be displayed.

6. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Coverdale in view of Shah in view of Detlef and in view of Besharat as applied to claim 8 above, and further in view of U. S. Patent No. 5,802,039 to Obayashi et al.

Regarding claim 9, Coverdale in view of Shah in view of Detlef and in view of Besharat does not teach that the pulsation is correlated to the amount the received voice signal departs from the predetermined threshold level. Obayashi discloses a mobile radio communication apparatus, in which the BER of a received signal is measured and displayed (col. 4, lines 51 - 60). If the BER reaches a certain threshold, the display blinks. Also, the speed of the blinking is changed in accordance with the value of the BER (col. 13, lines 32 - 35, 59 - 62). Since Coverdale, in view of Shah, Detlef and Obayashi all teach measurement of signal quality by a mobile communication device, and the pulsating of a visible display which gives an indication that signal quality has fallen below a threshold, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of Coverdale in view of Shah in view of Detlef and in view of Besharat such that the speed of the blinking of the display



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would correlate with the amount that the received signal departs from the predetermined threshold, as taught by Obayashi, so that the user could clearly notice the state of the received voice signal by glancing at the display.

***Response to Arguments***


7. Applicant's arguments with respect to claims 1-15 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sujatha Sharma whose telephone number is 703-305-5298. The examiner can normally be reached on Mon- Fri 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dwayne D. Bost can be reached on (703) 305-4778. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9314 for regular communications and (703) 872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.

  
Sujatha Sharma  
July 8, 2003

  
ERIKA GARY  
PATENT EXAMINER